

**ABSTRACT OF THE DISCLOSURE**

A rotation sensor includes a rotor rotatable together with an automotive steering shaft, a conductive band formed on the rotor, a magnetic coil/core unit fixed near the rotor, 5 the unit having a core body and an exciting coil, and a rotation angle detection circuit electrically connected to the coil. The width of the band gradually increases along a half-circumference of the rotor and then gradually decreases along the remaining half-circumference of the rotor, as 10 viewed in the rotating direction of the rotor. The detection circuit applies an alternating signal to the coil. As the rotor is rotated with the alternating signal applied to the coil, the band causes the impedance of the coil to change in accordance with the rotation angle of the rotor, and based on 15 the impedance change, the detection circuit detects the rotation angle of the rotor, that is, the steering shaft.